As to simplicity, everything in the metric system is in multiples or divisions of 10. In the imperial or customary system, the numerical progressions used to create multiples or subdivisions of units are complex. A yard is multiplied by 1,760 to make a mile; it is divided by three to make a foot, further divided by 12 to make an inch which in turn is divided into halves, quarters, eighths and sixteenths. The ounce is achieved by dividing the pound by 16; a division of the ounce by a further 16 produces the dram which, when divided by 27 11/32 results in the grain. The multiple of the bushel, the dry barrel, is gained by multiplying by 3 9/32. The bushel's subdivision, the peck, is made by dividing by four. The peck divided by eight makes a dry quart and that divided by two gives a dry pint. In the 10-based system, on the other hand, multiplication by 10 produces multiples and division by 10 subdivisions. Fractions are replaced by decimals. A single progression is learned for all units of length, capacity and mass.

Education in relation to conversion to the metric system involves two prime audiences: the general public and the student in the educational system. For the former, a continuing and ambitious information program is being carried out by MCC. With regard to the latter (a provincial responsibility), governments have been training teachers and adapting curricula accordingly. The process began with the teaching of the metric system as the predominant method in Grades 1, 2 and 3 in British Columbia in September 1973; it should be completed in all provinces and territories by the 1979-80 school year. Thus the burden of learning by rote an illogical and complex system of weights and measures is being progressively lifted from the shoulders of school children, with significant saving of time.

Many professional associations require use of metric measurement in their technical publications, and in scientific work outside universities there is consistent use of metric units. Support of conversion has been voiced by such groups as the Canadian Pharmaceutical Association, the Canadian Council of Professional Engineers, the Chemical Institute of Canada and the Engineering Institute of Canada.

It is in the area of trade and commerce that the most marked benefits may be expected to accrue in the longer term. The United States and Canada remain one another's best customer, and the United States has been going metric for several years. Conversion in the Commonwealth and Japan involves many Canadian customers, and the countries of the European Common Market are long-standing users of the metric system. Future trade with the developing nations, virtually all of which have adopted the metric system, may prove of significance. Because a trading nation must be alert to the measurement and standards system of the buyer, the overwhelming world movement to the metric system is an unanswerable argument for Canadian conversion.

History of measurement and the metric system

There is general agreement that the first quantity measured must have been length, and that the first linear units were based on parts of the human body. The thickness of a finger is known to be the origin of the digit, a unit of ¾ inch that probably came from the Sumerians but whose first known use was by the ancient Egyptians. It lingers today in rural areas of Great Britain, their metrication notwithstanding. The measure of a man's thumb is the origin of the inch as is his foot that of the foot. In ancient Egypt, among other early civilizations, the cubit was the distance from the tip of the middle finger, when the hand was outstretched, to the elbow (the hieroglyph for a cubit is a forearm). The hand (4 inches) is still the unit used to measure the height of horses. The pace was about equal to the distance covered by an adult male in a long step, and the fathom was the distance covered by the outstretched arms, from the finger tips of one hand to those of the other.

It is likely that volume was the second quantity that primitive man undertook to measure. This was probably effected at first by using any convenient receptacle — cupped hands, shells, gourds, the skulls of large animals, pottery. The measuring of weight (more properly "mass" because weight is the measure of attraction between two objects controlled by gravitational force) was a more complex process and no